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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/695,807

10/30/2003

Tzong-Liang Tsai

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01/14/2005

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EXAMINER

PRENTY, MARK V

ART UNIT

PAPER NUMBER

2822

DATE MAILED: 01/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/695,807	Applicant(s) TSAI ET AL.	
	Examiner MARK V PRENTY	Art Unit 2822	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 30 October 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9 and 10 is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

This Office Action is in response to the papers filed on October 30, 2003.

The specification is objected to because "sapphire substrate 30" (page 1, line 18) should read "sapphire substrate 10" (see Fig. 1a), and because "patterned transparent conductive layer 42" (page 9, line 5) should read "patterned transparent conductive layer 40" (see Fig. 5). Correction is required.

Claims 5, 6 and 8 are objected to because they recite "The light emitting diode device of claims 1." Correction is required (i.e., "claims 1" should read "claim 1" – note claims 2-4 and 7).

Claims 1-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Wu et al. (United States Patent 6,445,007 – hereafter Wu).

With respect to independent claim 1, Wu discloses a light emitting diode device (see the entire patent, including the Fig. 5 disclosure), comprising: a substrate 11 deposited on a bottom of the light emitting diode device; a semiconductor layer 12-14 formed above the substrate and including an n-type semiconductor 12, an active layer 13 and a p-type semiconductor layer 14, wherein the active layer is formed between the n-type semiconductor layer and the p-type semiconductor layer; and a patterned transparent conductive layer 15 is formed on the p-type semiconductor layer filled with a light-transmission conductive layer 19 so as to increase transmission effectively of the light emitting diode device.

Claim 1 is thus rejected under 35 U.S.C. 102(b) as being anticipated by Wu.

With respect to dependent claim 2, Wu's substrate 11 is a sapphire substrate (see column 3, lines 42-44).

Claim 2 is thus rejected under 35 U.S.C. 102(b) as being anticipated by Wu.

With respect to dependent claim 3, Wu's n-type semiconductor 12 is an N-GaN layer (see column 3, line 42).

Claim 3 is thus rejected under 35 U.S.C. 102(b) as being anticipated by Wu.

With respect to dependent claim 4, Wu's p-type semiconductor 14 is a P-GaN layer (see column 3, lines 45-46).

Claim 4 is thus rejected under 35 U.S.C. 102(b) as being anticipated by Wu.

With respect to dependent claim 5, Wu's active layer is an InGaN/GaN multiple quantum well structure (see column 3, lines 51-54).

Claim 5 is thus rejected under 35 U.S.C. 102(b) as being anticipated by Wu.

With respect to dependent claim 6, Wu's light-transmission conductive layer 19 is a metal-oxide layer (see column 4, lines 25-36).

Claim 6 is thus rejected under 35 U.S.C. 102(b) as being anticipated by Wu.

With respect to dependent claim 7, Wu's patterned transparent conductive layer 15 is made of at least one of metals selected from the group consisting of Ni, Au, Cr, Ir, Pt, Ag, Ru and Be (see column 4, lines 1-3).

Claim 7 is thus rejected under 35 U.S.C. 102(b) as being anticipated by Wu.

With respect to dependent claim 8, Wu's light-transmission conductive layer 19 with high transparency is an oxide layer selected from the group consisting of indium tin oxide (ITO), indium oxide, tin oxide, indium lead oxide, lead oxide, antimony tin oxide, antimony oxide, antimony zinc oxide, cadmium tin oxide, cadmium oxide, zinc oxide, and magnesium oxide (see column 4, lines 25-36).

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Claim 8 is thus rejected under 35 U.S.C. 102(b) as being anticipated by Wu.

Claims 9 and 10 are allowable over the prior art of record.

The prior art of record does not disclose or suggest to one skilled in the art the allowable light emitting diode device/method taken as a whole, including the light-transmission conductive layer.

United States Patent 6,107,644 (Shakuda et al.), United States Patent 6,291,839 (Lester) and United States Patent 6,835,958 (Uemura) are relevant to this application.

Registered practitioners can telephone the examiner at (571) 272-1843. Any voicemail message left for the examiner must include the name and registration number of the registered practitioner calling, and the Application/Control (Serial) Number. Technology Center 2800's general telephone number is (571) 272-2800.

  
Mark V. Prenty  
Primary Examiner